

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: PEARL LAKE	Lake Area (ha):	25.09
Town: LISBON	Maximum depth (m):	6.5
County: Grafton	Mean depth (m):	2.9
River Basin: Connecticut	Volume (m ³):	732000
Latitude: 44°12'00" N	Relative depth:	1.1
Longitude: 71°52'00" W	Shore configuration:	1.30
Elevation (ft): 1017	Areal water load (m/vr):	22.31
Shore length (m): 2300	Flushing rate (vr ⁻¹):	7.60
Watershed area (ha): 1295.0	P retention coeff.:	0.47
% watershed ponded: 0.0	Lake type:	natural w/dam

BIOLOGICAL:

	11 January 1989	6 July 1988
DOM. PHYTOPLANKTON (% TOTAL) #1	UROGLENOPSIS 75%	ANACYSTIS 75%
#2	SYNURA 15%	SYNURA 10%
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		685.0
CHLOROPHYLL-A (µg/L)		12.62
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 66%	SPARSE - NO DOMINANT
#2	SYNCHAETA 20%	
#3		
ROTIFERS/LITER	300	17
MICROCRUSTACEA/LITER	0	4
ZOOPLANKTON ABUNDANCE (#/L)	300	22
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		5.4
BOTTOM DISSOLVED OXYGEN (mg/L)	10.1	2.1
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.7
Hypolimnion volume (m³): None

CHEMICAL:

Lake: PEARL LAKE

Town: LISBON

	11 January 1989		6 July 1988		
DEPTH (m)	2.0	4.0	2.5		5.0
pH (units)	7.0	6.8	7.4		7.2
A.N.C. (Alkalinity)	18.8	19.2	15.6		14.0
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.38	0.32			
TOTAL PHOSPHORUS	0.031	0.030	0.012		0.012
CONDUCTIVITY (μ mhos/cm)	63.1	62.6	52.4		51.4
APPARENT COLOR (cpu)	26	25	16		18
MAGNESIUM			0.84		
CALCIUM			5.7		
SODIUM			1.6		
POTASSIUM			1.10		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	8	8	7		7
TN : TP	12	11			
CALCITE SATURATION INDEX			2.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1988

D.O. S.D. PLANT CHL TOTAL CLASS

**	1	3	3	7	Meso.
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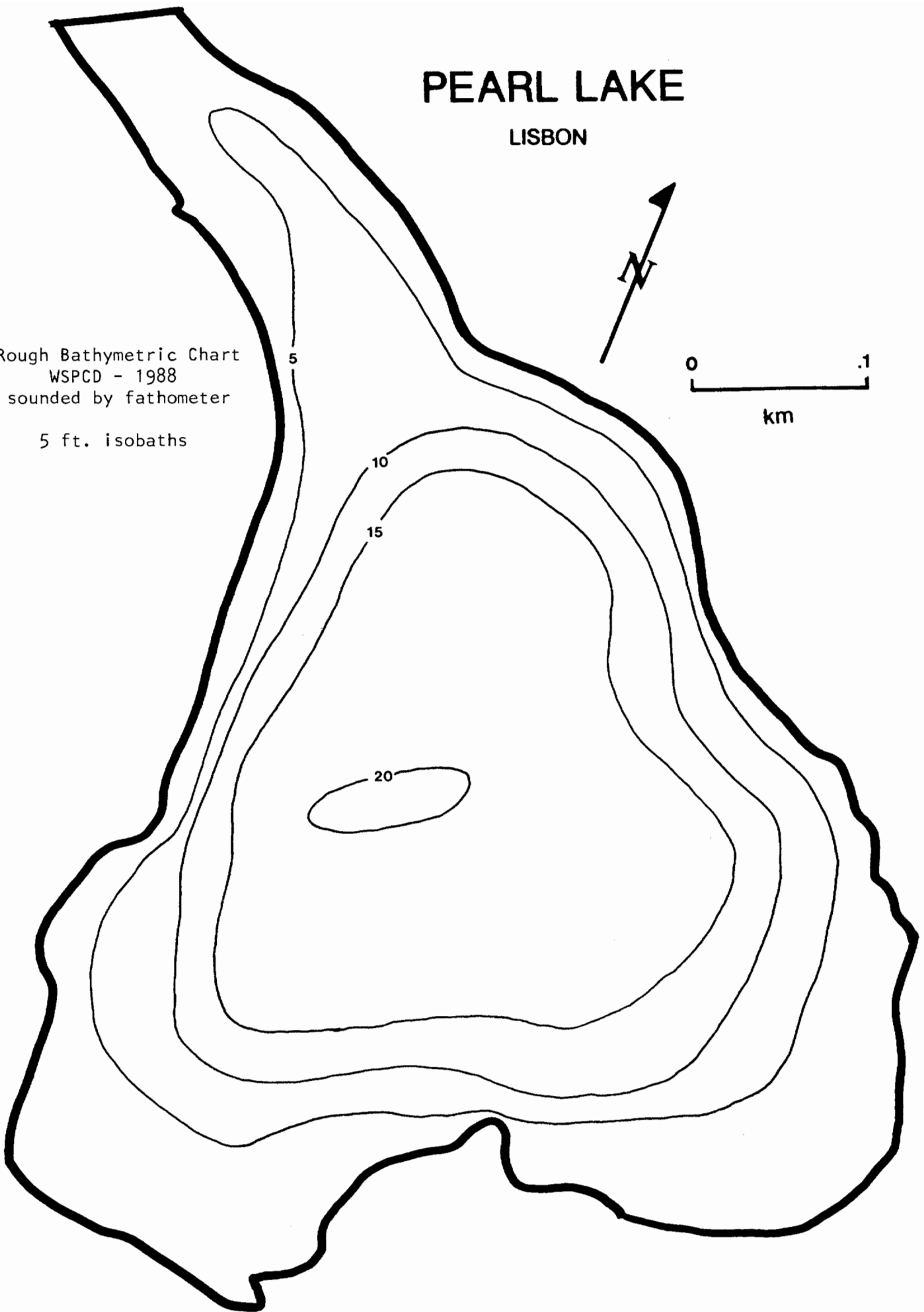
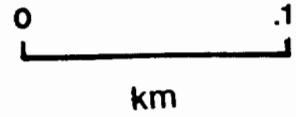
COMMENTS:

1. Lots of big bass were observed; also small bass, pickerel, and sunfish (observed many fish 'blips' on the fathometer).
2. Green algae (65%) were the dominant class of whole-water phytoplankton and tiny green flagellates (60%) were the dominant genera.
3. Previously was the public water supply for the Town of Lisbon.

PEARL LAKE

LISBON

Rough Bathymetric Chart
WSPCD - 1988
sounded by fathometer
5 ft. isobaths



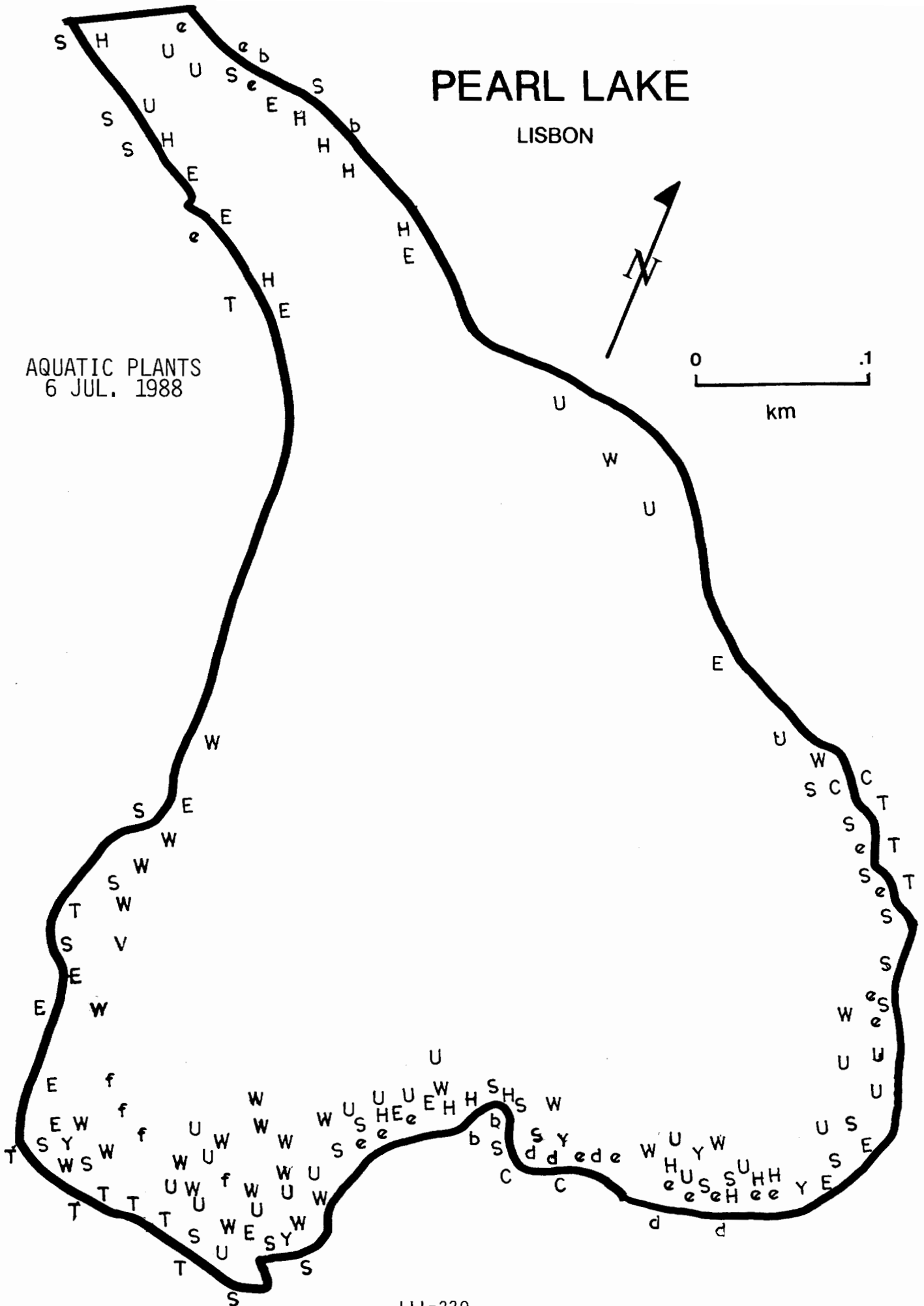
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PEARL LAKE

LISBON

AQUATIC PLANTS
6 JUL. 1988



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